

AU/ACSC/056/2001-04

AIR COMMAND AND STAFF COLLEGE

AIR UNIVERSITY

**AEROSPACE POWER'S CONTRIBUTION TO
HUMANITARIAN ASSISTANCE MISSIONS: REDEFINING
EFFECTS-BASED OPERATIONS**

by

Michael W. Holl, Major, USAF

A Research Report Submitted to the Faculty

In Partial Fulfillment of the Graduation Requirements

Advisor: Major Vicki J. Rast

Maxwell Air Force Base, Alabama

April 2001

Distribution A: Approved for public release; distribution is unlimited
--

Report Documentation Page

Report Date 01APR2001	Report Type N/A	Dates Covered (from... to) -
Title and Subtitle Aerospace Power's Contribution to Humanitarian Assistance Missions: Redefining Effects-Based Operations		Contract Number
		Grant Number
		Program Element Number
Author(s) Holl, Michael W.		Project Number
		Task Number
		Work Unit Number
Performing Organization Name(s) and Address(es) Air Command and Staff College Air University Maxwell AFB, AL		Performing Organization Report Number
Sponsoring/Monitoring Agency Name(s) and Address(es)		Sponsor/Monitor's Acronym(s)
		Sponsor/Monitor's Report Number(s)
Distribution/Availability Statement Approved for public release, distribution unlimited		
Supplementary Notes		
Abstract		
Subject Terms		
Report Classification unclassified		Classification of this page unclassified
Classification of Abstract unclassified		Limitation of Abstract UU
Number of Pages 56		

Disclaimer

The views expressed in this academic research paper are those of the author and do not reflect the official policy or position of the US government or the Department of Defense. In accordance with Air Force Instruction 51-303, it is not copyrighted, but is the property of the US government.

Contents

	<i>Page</i>
DISCLAIMER	ii
PREFACE	v
ABSTRACT	vi
INTRODUCTION	1
PROBLEM STATEMENT	4
Research Question	4
Context	5
Implications	7
Research Methodology	7
BACKGROUND	9
Food—Tomorrow’s Weapon of Choice	9
Airpower in MOOTW/HA	10
Lessons from Experience	10
Current Capabilities	12
Contemporary Doctrine	13
AIRPOWER’S DESIRED EFFECTS	15
Tactical Effects	16
Preserving Life	17
Preventing Population Dislocation	18
Influencing Individual Behavior	19
Operational Effects	21
Securing Humanitarian Aid	22
Protecting the Populace from Violence	23
Containment	24
Economic Regeneration	25
Policing Reform	26
Political Reconstitution	27
Disconnect Between Initiative and Perseverance	28
Strategic Effects	30
International Image	30
Political Cooperation and Political Access	32

ENHANCING AIRPOWER’S CONTRIBUTIONS TO HA MISSIONS	36
New Methods and Tools.....	37
Unintended Consequences.....	41
CONCLUSIONS.....	44
GLOSSARY	47
BIBLIOGRAPHY	48

Preface

I knew nothing about humanitarian assistance missions before I started this project, but I did have a violently biased opinion that the military wasted its time and degraded its capabilities by participating in activities that did not link to a US vital interest. I changed my opinion after studying the facts—I encourage my peers to do the same.

I thank Major Vicki Rast for her exceptional devotion to all students, and me in this instance, so that I could research this topic.

Abstract

The US military's joint doctrine identifies humanitarian assistance (HA) as one of 16 Military Operations Other Than War (MOOTW). The military's goal is to relieve the suffering of natural and man-made disasters. Often times, these disasters are superimposed with civil war or other political and security challenges, transforming them into situations known as "complex emergencies." Within these emergencies, actors use food as a deadly weapon. Unfortunately, contemporary military doctrine supporting HA remains underdeveloped compared to more traditional war fighting missions. This research focuses on framing airpower's desired effects during HA missions, missions analyzed for tactical (i.e., local), operational (i.e., regional), and strategic (i.e., national and international) implications. Small units at the tactical level can save lives, stop population dislocations, and influence attitudes and behaviors by delivering aid. Joint command structures coordinate and combine tactical efforts with other agencies and create the operational level effects of securing the food supply chain, protecting the population, containing spillover, and creating a functioning economy, police force, and government. Strategically, national image, political access, and cooperation can be improved through effective humanitarian aid. Airpower's speed and ability to reach remote areas can create these effects. New tools, such as large airships capable of direct delivery, can optimize and economize the effects to support US national security goals.

Chapter 1

Introduction

A soldier fighting other soldiers with similar weapons is the commonly held image of war. In current times, some military missions involve projecting force and securing operations short of a direct attack on an enemy. These Military Operations Other Than War (MOOTW) employ the military instrument of national power in an evolving role. MOOTW usually involve a combination of land, sea, air, space, and special operations forces, as well as cooperation with other US government agencies, foreign governments, the United Nations, and international non-governmental organizations (NGOs). Joint Publication 3-07 establishes MOOTW doctrine and identifies 16 different missions—one of which is Humanitarian Assistance (HA).¹ (For this paper Foreign Humanitarian Assistance (FHA) is synonymous with HA).

What makes HA missions unique within MOOTW is their focus on relieving or reducing the results of natural or man-made disasters. Televised scenes of starving children, squalid refugee camps, and communities destroyed by earthquakes, floods, or other natural events creates momentum for the United States to “do something,” either because it threatens the stability of a region or simply because it crystallizes a sense of responsibility in an American public to “do something” to relieve others’ suffering. The 1999 National Security Strategy supports humanitarian involvement in some circumstances “because our values demand it,” even if the United States has no interest in the region.² However, “relieving suffering” is an oversimplified

statement that generalizes many different processes.³ What is “relief” and whose definition of relief do we apply? How do we achieve the results and what are the possible outcomes? This paper explores what “relieving the suffering” means for HA missions, focusing specifically upon aerospace’s role.

Aerospace power brings unique tools to a humanitarian effort—the same tools designed to fight in the fast and extreme situations of combat. Currently, the term “aerospace power” encompasses two areas: airpower and space power. This analysis concentrates on the airpower component. Readiness, speed, security from attack, command and control, flexibility, and discipline are all features of military equipment and people. While it may detract from the availability to use these functions for war, airpower expeditiously delivers humanitarian aid to people who need it. However, just because you *can* do something does not mean you *should* do something.

Contemporary USAF doctrine is focused toward “effects-based” operations. Effects-based means that military actions—such as operations, targeting, or strategy—are designed to produce distinctive, desired results.⁴ In traditional battle, kinetic weapons that use energy to change or destroy an enemy’s resources create these effects. In a humanitarian mission, food, shelter, and basic necessities of life introduce energy to change the survival calculus for a targeted population.⁵ A military commander can create a range of effects depending on the tools one possesses and the knowledge and skill one employs using them. Yet, tools are different from desired effects.

While different, a hoe, a plow, and a shovel each can be used to achieve the same desired effect—to till the earth. A bomb, a fire, or an earthquake can each destroy a building, but to someone who wants to use the building, the level of destruction matters, and may prompt a

different approach (i.e., different tool) to achieve the desired effect. The link between tools and desired effects is made evident. A war fighter may want to use an earthquake to defeat an enemy, but no tool exists. A hydrogen bomb is a tool of war, but no post-World War II military has thought its use pragmatic. Existing tools for humanitarian aid include airlift, hardened logistics, and command and control networks. New tools and variations are possible that could enable new effects and new results. After developing airpower's desired effects for HA operations, an outline for the ways in which new tools could improve the results of using airpower for humanitarian assistance missions is presented. Before moving to these ideas, a few words regarding the research problem and the research methodology are warranted.

Notes

¹ Joint Publication (JP) 3-07, *Joint Doctrine for Military Operations Other Than War*, 16 June 1995, 3-1.

² The White House, *A National Security Strategy for a New Century*, December 1999, 2.

³ Michael Mandelbaum, "The Reluctance to Intervene," *Foreign Policy*, Summer 1994, 4.

⁴ "Doctrine Watch #13: Effects-Based Operations (EBO)," on-line, Internet, 30 November 2000, available from <http://www.doctrine.af.mil/DoctrineWatch13.htm>.

⁵ Col. John A. Warden III, "Air Theory for the Twenty-first Century," in *Challenge and Response: Anticipating US Military Security Concerns*, ed. Dr. Karl P. Magyar et al. (Maxwell AFB, Ala.: Air University Press, August 1994), 331.

Chapter 2

Problem Statement

Research Question

A well-developed literature and doctrine exist regarding the desired effects of bombing targets to achieve victory in war.¹ In contrast, military involvement in humanitarian aid delivery suffers from an underdeveloped set of recorded analyses. In USAF doctrine, there is no guidance that suggests HA cargo delivery is any different than delivering cargo during war. When the military delivers cargo to itself, it knows how it will employ those supplies. However, when the military delivers cargo in a HA situation, political consequences extend to that cargo. It is typical to think of the delivery of food, medicine, or shelter to be the mission “ends” rather than a means to a political end. Since the focus is on moving cargo rather than creating effects, when all the loads are delivered the mission is considered complete. However, the political consequences may continue as a targeted population acquires and consumes the goods. To address the full range of outcomes, I seek to answer the question, “What are the desired effects of using airpower in MOOTW/HA missions?” A brief comparison of humanitarian airlift with conventional airpower captures the value of a firm answer to my research question.

Col John Warden, an airpower advocate and architect for the Desert Storm air campaign, proposes that we must think of food delivery in the same way as bomb delivery.² Military organizations target bombs to achieve specific goals (e.g., interdict supplies or eliminate

chemical weapons sites). A more sophisticated military would not only be concerned with hitting those targets, but would be planning and measuring the effects of its targeting vis-à-vis one's objectives—military, political, sociological, psychological, economic, and informational. Similarly, humanitarian aid can and should be thought of as a weapon to fight an enemy's political purpose—a supply chain energized via airpower is the weapon system used as a delivery mechanism. Merely getting the HA to a country should not be the measure of success: Paralleling strategic bombardment, aid must be targeted to achieve a defined goal. Nor should getting the food to the right place be thought of as “mission complete.” Again, like combat bombardment, the final measure of success remains the effects created via the intervention. However, one cannot create a coherent HA strategic plan without first understanding the types of effects airpower can produce—this is the motivation for researching my question. Because HA missions vary, the next step is to define the specific context that bounds this analysis.

Context

Humanitarian aid missions may stand alone or be part of a larger operation that includes peacekeeping, peace enforcement, or even a general war. The most straightforward case is a pure HA mission in response to a natural disaster. A natural disaster in a politically stable country (e.g. flooding in Mozambique, 2000) may require the USAF's unique logistical tools to speed food and medicine delivery into the country, but the mission will not have the added burden of confronting violent opposition during distribution. The operation may be difficult, but it will not have to be managed against political opposition from a group inside the targeted country. While natural disasters present an opportunity for latent rebels or political opposition to overturn existing governments, and military forces always need to be prepared for hostile action, situations which lack an immediate threat produce conditions wherein the HA mission can be

executed without extensive resources devoted to force protection. Strategy design for a “pure HA mission” will not have to consider the increased friction of a potential armed opposition; as such, these situations are excluded from this context.

The more difficult situation is when HA, a non-combat mission according to Joint Publication 3-07, is conducted in parallel with combat missions such as peace enforcement.³ In the effort to achieve effects for both, military actions may be antagonistic rather than complementary. An action that facilitates distributing humanitarian aid, such as dispersing many small logistics bases, may endanger and complicate peacekeeping by exposing many small forces vs. concentrated ones. Joint Pub 3-07 emphasizes commanders in situations where combat and non-combat missions coexist “should pay particular attention to integrating, coordinating and synchronizing the effects and activities of their operations.”⁴ This very situation—HA running parallel with other MOOTW “combat” missions (e.g., peace enforcement)—is common in situations classified as complex emergencies.

John Prendergast, a researcher and author on humanitarian intervention, defines complex emergencies as “multi-causal political crises with major humanitarian repercussions”—combinations of natural events and deliberate man-made actions.⁵ Some people have vested interests in seeing the consequences of a natural disaster continue as they use it for their own political purposes. For example, starvation may motivate a persecuted ethnic group to flee a region, or may draw workers into a city where cheap labor can be exploited. In 1997, complex emergencies accounted for 78% of the US Office of Foreign Disaster Assistance (OFDA) emergency response resources.⁶ The preponderance of HA situations are complex emergencies rather than natural disasters. As already discussed, they tend to be more complicated politically when compared with a straightforward mission to deliver aid to mitigate a natural disaster.

Because of these two reasons, complex emergencies bound the context for this analysis. With the research question contextually grounded, the next step offers a vision for what improvements are possible.

Implications

Why do airpower's desired effects in HA missions need to be researched and articulated? The desired effects form a starting point for building strategy and designing a desired end state *before* intervening. Anticipating possible outcomes allows policy makers to evaluate options before committing to a policy that entails high-risk courses of action. At the same time, knowing the desired effects enables military planners to be creative in combining tools and forces to achieve results that effectively and efficiently support mission objectives. From this vantage point, planners can also launch new ideas for better tools and techniques that will enhance desired effects, just as new weapons development is a continuous process across the Defense Department. The remainder of this paper explores concepts for new airpower tools that are more effective at creating HA's desired effects. Before going forward, let me say a few words regarding the research methodology.

Research Methodology

Open source literature and personal interviews provided data for analysis. Many writers have contributed books and articles on humanitarian situations and their political mechanisms. Where gaps existed, USAF and United Nations personnel who have personally conducted HA missions provided clarification. Although I generated no new data as part of this research, collecting existing data and analyzing it has crystallized the desired effects of using airpower in MOOTW/HA missions. To prepare for understanding these effects, let's first focus our

perspective by reviewing the combat nature of complex emergencies, along with airpower's historical role in humanitarian assistance.

Notes

¹ See for example, Col John A. Warden III, *The Air Campaign*, (Washington: Brassey's, 1989); Air Force Doctrine Document (AFDD) 2-1, *Air Warfare*, 22 January 2000; Air Force Doctrine Document (AFDD) 2-1.2, *Strategic Attack*, 20 May 1998.

² Col John A. Warden III, "Air Theory for the Twenty-first Century," in *Challenge and Response: Anticipating US Military Security Concerns*, ed. Dr. Karl P. Magyar et al. (Maxwell AFB, Ala.: Air University Press, August 1994), 331.

³ Joint Publication (JP) 3-07, *Military Operations Other Than War*, 1-2.

⁴ Joint Publication (JP) 3-07, *Military Operations Other Than War*, 1-6.

⁵ John Prendergast, *Frontline Diplomacy: Humanitarian Aid in Conflict in Africa* (Boulder: Lynne Rienner, 1996), 1.

⁶ US Agency for International Development Bureau for Humanitarian Response Office of US Foreign Disaster Assistance Prevention, Mitigation, Preparedness and Planning Division, *Mitigation Practitioner's Handbook*, October 1998, 3.

Chapter 3

Background

Bread without democracy is bitter, but democracy without bread is fragile.

— General Jaruzelski, former leader of communist Poland

Food—Tomorrow’s Weapon of Choice

Food can be used as a weapon of war: withheld food becomes a lethal weapon while supplied food can be used as a motivator for some desired action.¹ Berlin and Somalia are among the most widely known sites where the basic needs of humanity were manipulated to bring about a political end . In 1948, the communists closed off access to the allied sectors of Berlin in order to compel them to abandon the democratic sanctuary.² While the Berlin crisis did not cause widespread deaths, Somalia proved different. By 1992 more than one-half million Somalis died from a famine exacerbated by civil war.³ The Clausewitzian principle that ‘war is politics by other means’ can be applied to “wars of hunger” just as it is to unlimited wars vis-à-vis the western perspective on war.⁴ Leaders can use food in addition to rifles and other armaments to create casualties and compel adversaries into adopting their political position.

War has always been the primary function of warriors, although through the years the weapons have changed. Spears, gunpowder, airplanes, and malicious computer codes are technological advancements applied to contemporary patterns of organized violence known as “war.” Even though weapons have changed, the intent of using them for political purposes has

remained the same—to compel an adversary to do one’s will. A frightening and deadly weapon exists when a group can control a competing group’s access to food, water, and shelter. In the context of a complex emergency, humanitarian aid must be considered a weapon and the engagement as a war best suited for execution by warriors who are knowledgeable about the possible desired effects that support their political objectives. Airpower forms a component of that weapon, and plays a critical part in the engagement.

Airpower in MOOTW/HA

Airpower is one component of the American military instrument of power (IOP). Yet, the military coexists alongside the diplomatic, informational, and economic IOPs that form our national strength in total. Humanitarian assistance missions are but one situation wherein policy-makers employ appropriate IOPs synergistically to guarantee national security objectives. Acknowledging what airpower has accomplished in the past, while analyzing current capabilities, provides a format for future doctrine in support of HA missions.

Lessons from Experience

History provides examples of airpower being used to supply vital humanitarian aid in complex emergencies. The Berlin Airlift, support to Iraqi Kurds, and Somalia are outlined briefly to provide background into what has been accomplished in the past. What is common to all three is that airpower delivered humanitarian aid in the midst of political crisis (recall that response to a “pure natural disaster” is not considered in this research).

Berlin Airlift, 1948. The Berlin Airlift served as the first large-scale use of airlift alone to compel a decision in a political conflict. The US Air Force delivered over 2.3 million tons of supplies in 463 days of the operation. Every 90 seconds a plane landed, with 277,000 sorties

flown in total.⁵ Although the airlift moved great quantities, the distance each plane had to fly remained relatively short. By sustaining West Berlin's humanitarian needs through this non-combat course of action, the United States compelled the USSR to terminate the blockade on 12 May 1949 without a shot being fired. A more contemporary operation provides another example.

Iraqi Kurds, 1991. Iraqi government forces pushed Iraqi Kurds out of their homeland. Many died as they tried to survive in camps and struggled for a political solution that would allow them to return home. Landlocked in rugged terrain, US Air Force C-130's airdropped supplies that in some instances had the unfortunate effect of crushing people to death.⁶ There remained a conscious effort among the relief community, including the military, to develop a plan to get the refugees back into their homes as soon as possible.⁷ The operation delivered 40,000 tons of supplies over four months and also repatriated 14,000 refugees.⁸ While it successfully re-stabilized the region, not all operations have had the same level of success.

Somalia, 1992. In this case, a multinational military mission employed airpower to combat drought conditions and ongoing civil war that combined to create famine. By early 1992, before US involvement, more than one-half million Somalis died of starvation.⁹ In the first phase of the mission, the 6-month long Operation Provide Relief, C-141s and C-130s averaged 20 sorties moving 150 tons a day, delivering a total of 28,000 tons of supplies. The aircraft operated out of Mombassa, Kenya, and brought supplies into secure and permissive locations within Somalia during the day.¹⁰ When security became an obstacle to food delivery, President George H. Bush ordered the beginning of Operation Restore Hope on 26 November 1992. Ultimately involving 28,000 US troops in addition to those of other nations, the mission added peacekeeping to humanitarian aid delivery, providing 40,000 tons of supplies in the first 147 days.¹¹ However,

US involvement ended abruptly after a firefight with rebels left 18 US Army Rangers dead.¹² It is unclear whether this aid favorably reshaped the political or institutional structures inside the country or whether it supported US national security objectives. What is clear in all three examples is that the military attempted to use airpower's capabilities to achieve policy objectives, and as capabilities progressed in time it did not necessarily translate into greater success.

Current Capabilities

The current mechanisms for air-delivering humanitarian aid utilize both fixed and rotary wing aircraft to perform conventional and airdrop missions. Infrastructure, security, and availability influence which systems can be used to deliver goods. The costs associated with airlift are high compared with ground or sea transportation, but airlift overcomes cost disadvantages when speed or access constraints make ground and sealift ineffective or impossible. Besides the airlift missions, the distribution network (i.e., the supply chain) that goes along with the cargo flights is an important facet of the total airpower delivery package.

Distribution points, storage, and transfers need to be optimized to maximize the logistical system's throughput. It may be more economical to distribute goods at a few large centers, but this creates other problems (discussed in chapter five). Storing the goods not only costs money but also can become a security risk in a complex emergency as storage facilities are targets for political factions—raiding a warehouse can be likened to raiding an armory in conventional war. Transfers such as ship-to-shore, airplane-to-truck, or airplane-to-airplane slow throughput and require an infrastructure that increases risk of exposure to adversary targeting. In complex emergencies, Non-Governmental Organizations (NGOs) distribute most of the aid, so the design of an optimum supply chain that balances security and economy with the desired effects of the

operation is not completely under the military's control.¹³ The US military possesses a unique ability to create a supply system using airdrop via long-range, short-range, and rotary-wing airlift. Doctrine that reflects the current capabilities enables the most effective use of airpower.

Contemporary Doctrine

Current doctrine prescribes how operations will be run in the near future. Joint service doctrine (Joint Publication 3-07) and Air Force doctrine (Air Force Doctrine Document 2-3) both frame the MOOTW/HA mission. These documents explain the Principles of MOOTW (i.e., objective, unity of effort, security, restraint, perseverance, and legitimacy) and demonstrate the ways in which MOOTW principles differ from the Principles of War.¹⁴ Existing MOOTW doctrine provides strategic and operational guidance, yet only limited tactical guidance. A comparison of doctrinal guidance concerning MOOTW and something the USAF has a lot of experience in (e.g., AFDD 2-1.1 on Counterair Operations) shows a clear difference in detail. The underdevelopment of the MOOTW mission is being addressed with new documents (e.g., draft Joint Publication 3-07.6), but a “clear lack of doctrinal guidance” exists.¹⁵ The continuing challenge is to link military actions with desired effects and to ensure fusion into USAF doctrine. With an understanding of the background of HA and airpower's role, let's focus explicitly on the desired effects airpower can achieve through its HA mission.

Notes

¹ Joanna Macrae and Anthony Zwi, ed., *War and Hunger: Rethinking International Responses to Complex Emergencies* (London: Zed Books, 1994), 11.

² Keith A. Hutcheson, *Air Mobility, The Evolution of Global Reach* (Vienna Virginia: Point One and VII Publishing, 1999), 11-12.

³ Kenneth Allard, *Somalia Operations: Lessons Learned* (Washington D.C.: National Defense University Press, 1995), 13.

⁴ Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton, N.J.: Princeton University Press, 1976), 87.

Notes

⁵ Keith A. Hutcheson, *Air Mobility, The Evolution of Global Reach* (Vienna Virginia: Point One and VII Publishing, 1999), 28.

⁶ Thomas J. Trask, *The Special Osprey: Impact on Special Operations Doctrine*. SAAS Thesis, Maxwell AFB, Alabama, (June 1996), 49.

⁷ Andrew S. Natsios, "Commander's Guidance: A Challenge of Complex Humanitarian Emergencies," *Parameters* 26, no. 2 (Summer 1996), 69.

⁸ Daniel L. Haulman, *Wings of Hope, The U.S. Air Force and Humanitarian Airlift Operations*, (Air Force History and Museums Program, 1997), page 15.

⁹ Kenneth Allard, *Somalia Operations: Lessons Learned* (Washington D.C.: National Defense University Press, 1995), 13.

¹⁰ Kenneth Allard, *Somalia Operations: Lessons Learned* (Washington D.C.: National Defense University Press, 1995), 15.

¹¹ Kenneth Allard, *Somalia Operations: Lessons Learned* (Washington D.C.: National Defense University Press, 1995), 17; Keith A. Hutcheson, *Air Mobility, The Evolution of Global Reach* (Vienna Virginia: Point One and VII Publishing, 1999), 28.

¹² Andrew S. Natsios, *U.S. Foreign Policy and the Four Horsemen of the Apocalypse: Humanitarian Relief in Complex Emergencies* (London: Praeger, 1997) 24.

¹³ Thomas J. Keusters, World Food Program, interviewed by author, 4 Jan 2001.

¹⁴ Joint Publication (JP) 3-0, *Operations*, 1-3, 2-1.

¹⁵ James S. Corum, "Airpower and Peace Enforcement," *Airpower Journal* 10, no.4 (Winter 1996), 10.

Chapter 4

Airpower's Desired Effects

You don't have to live like a refugee.

—Tom Petty and the Heartbreakers

Common knowledge of the difficulties refugees face allows popular music to use their suffering as a metaphor for other life experiences. The stated objective of humanitarian assistance is to relieve suffering.¹ While a noble statement, “relieving suffering” is not specific enough for managing an effective operation. The challenges this approach presents include what kind of suffering qualifies for HA? How will progress be measured? Will temporary relief of a particular problem create obstacles to resolving the suffering produced by enduring problems? If so, which problem has priority and who decides? Replacing the ambiguity of “relieving suffering,” this analysis uses verifiable criteria (e.g., survival, cooperation, and security) to characterize desired effects sought from an HA mission. Airpower plays a unique role in producing them: This becomes evident when these effects are separated and organized around the scope of the effort.

Airpower's contribution to achieving desired effects for humanitarian assistance can be realized at the tactical, operational, and strategic levels. These are not synonymous—but are similar—to the levels of war. In this context, the *tactical* level can be thought of as the individual or local level. An individual making a decision or taking action that supports the intended objective would be a desired effect at the tactical level. An example would be one

person deciding to remain in his or her locality and live off aid rather than becoming a displaced person searching for food. The small units (i.e., military and NGO) that move the humanitarian aid into position or distribute it create these effects. Moving up to *operational* level effects, a community or state (rather than individuals) would begin to behave, function, or take action that supports the intended objective. To create these effects, higher-level commands would coordinate many small units to reach groups of aid recipients. Along with aid delivery, commanders may need to coordinate diplomatic support and economic aid provided by other US agencies, IGOs, NGOs, or other states as well. The Joint Task Force (JTF) usually serves as the military's coordinator for small group actions and is responsible for creating the operational level effects that influence the entire Area of Responsibility (AOR). At an even higher level are *strategic* effects, designed by the National Command Authorities (NCA), and produced at the interstate level. Military units support these strategic effects with results at the tactical and operational levels. The three levels—tactical, operational, and strategic—remain interdependent in that the actions on one level affect the results on another. It is useful to organize the desired effects this way to link the actions taken at each level to the effects created, and, therefore, their subsequent results.

Tactical Effects

At the individual level, humanitarian operations preserve life, prevent population dislocation, and influence individual behavior. Airpower's speed and ability to deliver aid in close proximity to individuals helps create these effects. The tactical effects airpower can achieve are preserving life, preventing population dislocation, and influencing individual behavior.

Preserving Life

Rapid global mobility can preserve life during a complex emergency by speeding delivery of basic necessities to a deprived populace. Airlift may not only be necessary because of speed, but because a broken infrastructure may have paralyzed the ground-based distribution network. Without the necessary nutritional, medicinal, and sheltering needs people die. The Sphere Project has quantified minimums for the basic life-sustaining necessities to establish humanitarian assistance standards.² While NGOs and UN agencies know what people need, they do not have the capability (i.e., the tools) to bring aid to bear on the suffering region effectively and efficiently. Time is of the essence in preventing death during a complex emergency: Slowing mortality rate is an oft-stated and reasonable objective for humanitarian missions. This desired effect is created at the individual level when agencies deliver materials to sustain basic human needs (e.g., rice, water purification equipment, tents, plastic sheeting) and, hence, life itself.

Airpower's contribution to saving lives during a complex emergency not only involves airlifting aid, but also sustaining the pipeline and its security. Ground operations that load and unload the aircraft, service them with fuel, and provide air traffic control support the whole mechanism getting aid to those in need. The pipeline is not immune to threat: A commander remains concerned with security and force protection issues wherever troops are stationed. Because the military confronts these threats and a commercial business avoids them, there are some tasks the USAF can accomplish that are not available for purchase in the commercial market.

The USAF can provide its own infrastructure tools and its own security. To be prepared for war, the USAF has the ability to go to a bare base with no infrastructure and build it as part of its operation. In contrast, commercial air cargo companies rely on infrastructure support (e.g.,

unloading and refueling equipment) from the airfield they land at, and do not prepare for providing their own infrastructure if none exists. In the same way, skills honed for war make routine the activities of securing an airfield and operating it without penetration by unauthorized people. A typical air freight company does not consider airfield security its responsibility.

Use of military airpower yields a fast, sustainable, and secure supply chain to get goods into an area and distribute them before people die. Dying is also connected to population movement; according to Andrew Natsios, former Director of the US Agency for International Development (USAID) Office of Foreign Disaster Assistance (OFDA), “the great majority of people who died in the Ethiopian famine of 1984-85 had left their villages.”³ The next tactical effect concerns whether individuals stay in their homes and communities.

Preventing Population Dislocation

Widespread population dislocation creates tremendous change in a community, both for the people that stay and those who leave. People who remain will have to augment or find alternatives for the life-sustaining functions normally performed by the people who leave (e.g., medicine, police enforcement, trades, and agriculture). Those who abandon their homes have to find shelter and survive without their traditional and familiar coping mechanisms they enjoyed inside their community. Before migrating, they often sell tools or material necessary to sustain their way of life. Additionally, they face increased risk of disease as they travel making it extremely difficult to return to a pre-crisis way of life.⁴ If refugee camps develop, they are often centers of severe medical problems and political extremism.⁵ The presence of refugees may destabilize a foreign community as resources are drawn away and the host community’s society is disrupted. The International Committee of the Red Cross (ICRC) used the term “host-family fatigue” during the Albanian refugee crisis in 1999.⁶ While airlift can be used to bring aid to

people already displaced and in refugee camps, it can also be used to target humanitarian aid toward people *before* they decide to leave their communities. This makes arriving at a desired end state less arduous as people do not have to be repatriated. Hence, the desired effect is to prevent population dislocation, not to repatriate it once it “returns”.

Small units would need to sustain a large distribution network so the aid would come to the people as opposed to the people moving to the aid. Airpower’s role would be to transport goods efficiently to a large number of distribution or staging sites, and especially to deliver aid to sites inaccessible by ground or sea. Security plays a role in this because a region may be accessible by truck, but a commander may eliminate ground transport after considering the threat of ground attack. Airlift—via fixed-wing aircraft, helicopters, and airdrops—may be the only secure course of action for reaching an isolated community.

A supply chain, properly designed, will support the desired effect of preventing population dislocation. After targeting individuals to keep them alive and in their communities, another effect is possible. Those controlling aid can use it to influence people’s behavior.

Influencing Individual Behavior

In complex emergencies, those who created the adverse humanitarian conditions may be among the suffering. While their intent may have been to exacerbate a natural disaster to weaken an enemy or compel their adversary to abandon an area, the progenitors of the suffering may have become entrapped in their own disaster. When delivered to people who created the complex emergency in the first place, humanitarian aid sustains the struggle. The aid may give them enough sustenance to continue their fight as they deny aid to their adversary. Many international organizations (e.g., ICRC) place no conditions on the receipt of aid—this is problematic if the overall objective is to end the conditions of suffering and bring the community

to a point of self-sufficiency.⁷ The possibility exists that an actor (i.e., military commander, NGO, UN) could target aid at a tactical level to motivate or reward some desired behavior that most quickly brings about the desired end state. This, however, is easier said than done.

Targeting food aid to promote or dissuade certain individual behaviors is difficult because of the diversity of forces and agencies involved in the process. Most of the aid is handed to victims by NGOs, not a US agency.⁸ For the military to attempt this they would have to expand their role in HA operations and take over traditional NGO roles. If the military did not want to take this on themselves but tried to persuade the NGOs and UN to target aid to individuals, it would require them to change their rules regarding non-discrimination.⁹ Although possible, it is not practical to target an individual to influence behavior. At the group level, such targeting is likewise difficult.

A military commander could try to target aid at groups to motivate a desired behavior, but this too is problematic. One would still have to overcome the NGO and UN disposition not to discriminate (i.e., their exercise of impartiality) as long as there is a need for aid and a safe way to distribute it. The group not cooperating and being denied aid could use the informational instrument of power by claiming racism, political bias, or a host of other unfair treatments. Although not a conscious effort to reward or punish behavior, there is an example of unintentionally changing the behavior of a community by stopping aid delivery. In June 1993, in southern Somalia, the ICRC stopped delivering aid because it determined the food crisis was over. Because they did not adequately communicate this change with the population, they created confusion and anxiety among local Somalis.¹⁰ The example shows the persuasion one can generate by manipulating aid, and suggests that this effect is pursued more successfully at a

level higher (vice tactical) where it can be coordinated and integrated into operational objectives to achieve operational effects.

Operational Effects

Widespread, coordinated use of tactical effects form the basis of operational effects. In addition to changing the condition of individuals, operational effects achieve results across whole communities or states within the region. For humanitarian aid, creating these effects at the operational level requires close cooperation with NGOs, the UN, and other US government agencies, making it again unlikely that the military will lead or coordinate the overall effort. In joint doctrine, the principle of “unity of effort” is applied to MOOTW as a derivative of the war-fighting principle “unity of command.”¹¹ Doctrine acknowledges a military leader cannot command all functions of a combined civilian/military operation. However, it does underscore the importance of all groups acting toward a common purpose if the desired operational effect is to be achieved.

Specifically, six desired operational effects can be captured by two broad categories: security and institutions. Security of the humanitarian aid is important so that it is used for its intended purpose and not stolen or used as a weapon by an enemy. Protecting the populace is a desired effect if the objective is to facilitate the return of the conflicting parties to a civil way of life, one wherein individuals do not have to employ resources to protect themselves from violence. Relatedly, containment combines many tactical and operational effects to prevent the complex emergency from enlarging or spillover. Creating functioning institutions such as an economy, a police system, and a government are desired effects if the objective is to create a community that can become self-sustaining or a state that can interact productively with other states. Consequently, these six desired effects emerge at the operational level: (1) securing the

humanitarian aid, (2) protecting the populace from violence, (3) containment, (4) economic regeneration, (5) policing reform, and (6) political regeneration. Because building these institutions sets up a conflict between the cross-cutting military cultural value of “taking the initiative,” and the MOOTW principle of “perseverance,” I include a discussion about the disconnect created when policy makers strive to achieve these desired effects. However, securing humanitarian aid does not suffer this conflict.

Securing Humanitarian Aid

Ensuring aid arrives at its intended distribution point is the most controllable operational effect. In Somalia, the US Central Command (CENTCOM) mission statement for Operation Restore Hope included reference to securing “key installations and food distribution points,” and providing “open and free passage of relief supplies...(and) security for convoys and relief organization operations.”¹² As discussed, food can serve as a lethal weapon of war. An unintended consequence of bringing humanitarian aid into a complex emergency without properly supervising its arrival to its final destination could be to intensify the violence as groups compete for control of the aid. Therefore, the first desired effect at the operational level is to secure the aid distribution pipeline.

Airpower’s role in securing the aid distribution pipeline is to be able to fly the goods to a friendly location and maintain control of them until turning them over for distribution. Obstacles to the supply chain include having the targeted population surrounded by unfriendly forces, isolated by floods, or lacking an infrastructure for anything but rugged military planes or helicopters. Used in conjunction with ground power, the aid can be protected as it flies through the air, is unloaded on the ground, and continues by ground transport to the distribution center. With the acute crisis of starvation mitigated, the population will have a dependable supply chain

for the long term, enticing people to return to a normal way of life. This follows Maslow's hierarchy of needs, a classic theory of motivation, that argues all human needs can be organized into five levels beginning with physical needs (i.e., food, water, air) and continuing with safety, love, esteem, and self actualization.¹³ Humans fulfill their physical needs before being motivated to fulfill the higher-order ones. With this in mind, humanitarian aid provides the foundation for a society to function beyond the immediate crisis. A step above on Maslow's hierarchical scale is safety—translated here as protecting the populace from violence.

Protecting the Populace from Violence

Food does not protect a group of people from other people; as discussed, its unequal distribution may make violence against the “haves” more likely. Creating security for the population may require combining a peace operation (e.g., peacekeeping, peace enforcement) with HA. Humanitarian aid can be linked to violence. During conflict in Mozambique, the arrival of relief supplies in a given area tended to intensify the fighting.¹⁴ Food storage, a traditional way to prevent famine, became a liability for communities because it was also an incentive for enemies to attack.¹⁵ The desired effect is to create conditions of *total* human security—having enough to eat and clean water to drink, feeling reasonably certain that a building constructed or crop planted will not be destroyed, and knowing that it is safe to travel to a market or go to sleep for the night. In a complex emergency, a commander may need to deliver humanitarian aid in conjunction with some sort of peacekeeping or peace function to create a “better state of peace” for the long run.¹⁶ A range of military tools and techniques create this effect, but its sustainment remains highly dependent upon troops on the ground.

Committing airpower to aid delivery in the absence of ground power (for necessary/requisite peace operations) will make achieving this desired operational effect difficult. During the first

phase of US involvement in Somalia (Operation Provide Relief, Aug-Dec 1992) airlift alone provided aid to famine-stricken populations. When security became an obstacle for continuing this mission, President George H. Bush initiated Operation Restore Hope to provide security (by American ground troops) combined with humanitarian aid delivery.¹⁷ For this effect, it is most important to acknowledge where airpower falls short. While it can deliver the basic necessities of life, airpower is not an effective tool for stopping violence on the ground unless those groups are organized into regular military units using modern weapons according to western doctrine. However, by properly integrating humanitarian assistance and peace operations, planners can create synergy by de-conflicting tasks from both missions and create the desired effect of protecting the population. This protection is crucial for preventing spillover.

Containment

It may be beneficial to isolate the complex emergency to a particular region so that a population influx, disease, or food security does not threaten a neighboring country or region. Refugees spilling over into another country can overburden local resources and generate disease, spreading the suffering to an already strained community and vulnerable political landscape.¹⁸ Even if it is not possible to stop the suffering inside the original country, a desired operational effect could be to do what is possible to limit the crisis' spread and destabilization.

Airpower has a role both trying to motivate people to remain in their communities and in providing a dislocated population with basic needs. For refugee sites that are being overburdened, additional humanitarian aid can reduce the adverse effects on the local infrastructure. Airpower is equipped to form the core of a supply chain that targets aid to people at risk of leaving their homes. A commander could prevent the flight of refugees by sending the aid directly to communities and protecting the populace from violence. The operational effect

would be to contain the complex emergency within the area already affected. While protecting the populace and securing the aid pipeline both can be accomplished by military initiative, the next three effects require the target population to act toward creating their own societal institutions.

Economic Regeneration

Some form of economic exchange usually exists even in the most desperate of circumstances. After three years with no national government in Somalia, its currency maintained relatively stable rates vis-a-vis the US dollar.¹⁹ A desired effect at the operational level is to use aid to regenerate a functioning economy in which everyone can freely participate. Creating a functioning economy generates an organic mechanism for producing and transferring goods, an approach much preferred to delivering humanitarian aid indefinitely. Additionally, for third party interventions a functioning economy can be a crucial element to formulating an exit strategy—this element, however, needs to be nurtured with great caution.

Care must be taken to ensure the introduction of aid does not influence adversely the costs of local goods and extinguish the fragile remnants of any remaining indigenous economy. The price of goods may get very expensive during a complex emergency and destroy the purchasing ability for the masses, excluding them from the new aid-based economic order.²⁰ Airpower can be used to supply aid, yet if not distributed properly the effect can secure a short-term tactical level success (viz., saving lives) but produce a mid-/long-term operational level failure (viz., ruining the economy, thereby insighting further violence). This is why aid must be controlled—targeted is a more appropriate term—at the operational level. For example, aid given away indiscriminately may create a drop in price such that no incentive exists for people to grow crops and raise livestock.²¹ The way airpower integrates into the humanitarian aid supply chain, and

how well the supply chain targets aid for desired effects, influences the rate at which an economy regenerates during and after a complex emergency. This same principle of proper integration holds for energizing a police force.

Policing Reform

Establishing a system for law and order remains a paramount desired effect because the system promotes an environment wherein people can concentrate on building infrastructure to enhance their individual and collective futures. Rather than using foreign soldiers as a police force, this effect impels the targeted community to perform this task for itself. A system that protects the weak from being taken advantage of by the strong—or, more appropriately, the “corrupted strong”—is necessary so that all community members can sustain shared hopes that their investments will benefit them and their families in the future. Until people have secured the food, water, and shelter in the present, it is not reasonable to look forward to living better in the future.²² However, if there is a high probability that the fruits of their hard work will be taken from them, there is little incentive to build a better life and society today. A functioning police force protects progress toward self-sufficiency and promotes an end to externally-provided humanitarian aid. However, this police force is not the same as an American-modeled legal or criminal justice system. Most societies develop traditional ways of ensuring justice and reconciling wrongs. A police force suited culturally to the particular society can maintain order, protect the weak from being taken advantage of, and, most of all, allow people to expend fewer resources on their own security, freeing them to invest in their futures. Operational commanders can support this effect logistically.²³

The ways in which airpower supports the logistical system influences the intervener’s and indigenous populace’s collective ability to create a sustainable policing force. First of all,

airpower creates the food security conditions that enable the populace to desire the creation and maintenance of an orderly society. Next, the airlift-dominated distribution network needs to be designed with a plan for the transference of the security function to the local populace. A hypothetical example is the location of aid distribution centers being optimized for local police protection instead of optimized for proximity to airfields. While there is a benefit for simplifying the process of getting aid to people, a better choice may be to locate distribution centers where it will be easier to relinquish protection to the locals. In addition to airlift and aid logistics, some surveillance and other aerospace acquired intelligence can support police functions. While there are things that airpower can do as an enabler, its contribution toward this desired effect remains limited at this time. These limits do not, however, diminish the desired effect of creating a functioning police force. The USAF must creatively envision the ways in which it can expand its contribution as an enabler. An even greater challenge is to create a functioning government.

Political Reconstitution

Because it involves building many institutions—including police forces and economic structures—generating a government is the most ambitious operational effect. A government wherein decisions made on providing external security, public works, public safety, education, agriculture, the legal system, etc...are translated into action and accomplishment benefits all members. Humanitarian aid provides the necessary, but not sufficient, conditions for a government to emerge. Again following Maslow's theory, peace operations and diplomacy may provide incentive for a populace to create a new government, but if at the same time people are struggling with basic human or physical needs, they may not be motivated to reconstitute their political system. Military forces shape the environment from which a new government appears.

Airpower's contribution to creating a new government extends from its ability to integrate and legitimize new power structures within the target country. Diplomats and civil affairs officers serve as the leaders in creating government structures. Yet, at the operational level those military operations involved with providing and distributing aid can send messages to the populace and the government. For instance, if a budding government promises aid to a particular community and the military declines the mission—because it is too dangerous by ground convoy and there exists no runway long enough to land the smallest airplane—its declination undermines the credibility of the new government by not making its promises appear trustworthy or genuine. While airpower may be the primary means for keeping the country supplied with aid, the ways it executes its operations can support a new government's creation. While airpower has a supporting role, admittedly only the local populace can create its government. A military commander can take the initiative to create the conditions to make it possible, but must persevere while the local populace takes positive action.

Disconnect Between Initiative and Perseverance

A society will consolidate its means for survival before it starts building institutions. Humanitarian aid builds a bridge towards creating economic, police, and government systems. These are desired effects, however, the military does not retain the initiative to create them—it is in the hands of the indigenous people. Although a military or diplomatic corps can take the initiative to create the *conditions* and *incentives* for a community to build their own institutions, they cannot take an imperialist approach to imposing them. For this reason, it is interesting to contrast “initiative”, a US Army tenet of operations, with “perseverance”, a Joint Doctrine principle of MOOTW, to see how pursuing desired operational level effects may create conflict within a military command.²⁴

Army leaders are trained to take the initiative and to deny it to the enemy (this value is present in other services as well). Adm James Ellis, Commander of JTF Noble Anvil during the 1999 Kosovo action, drew attention to one of the campaign's weaknesses: "Only the enemy could decide the war was over."²⁵ This suggests the admiral would have preferred to force a decision. The value of the initiative is rooted in combat. Is MOOTW different? The Army field manual that defines initiative includes a paragraph for operations other than war, contending that, "initiative implies controlling the environment rather than letting the environment control events."²⁶ This guidance is difficult to apply to a complex emergency because the field manual does not address the mechanisms by which a military commander can "control the environment". A contrasting principle of MOOTW is perseverance.²⁷

The military contribution to creating societal institutions, such as police forces and political governments, is to create an environment that facilitates the desired outcome. Through the principle of perseverance, joint doctrine argues for a "patient, resolute, and persistent pursuit of national goals and objectives"—this does not contrast with FM 100-5's forbidden "waiting for the environment to control events."²⁸ When the objective requires creating conditions and then waiting for the desired effect to occur, perseverance is necessary. While this conflicts with institutional wisdom regarding the value of initiative, the doctrinal principle of perseverance supports the legitimacy of a military role in effects such as creating a police force or government. It also suggests military leaders and planners must think differently when engaging in HA operations.

Natsios makes clear that in HA missions within complex emergencies the military has to overcome its natural training to take the initiative and "win" the engagement. There is no winning an HA engagement—only creating *effects* or creating *conditions* for change so that

national security objectives are met.²⁹ While these operational effects are created at the community or state level, national security policy may also be aimed at achieving international effects.

Strategic Effects

A humanitarian assistance operation can produce effects outside the country undergoing a complex emergency as well as within it. For this research, the strategic level is defined as such—a desired effect produced outside the region receiving aid. Strategic effects begin with creating and maintaining a positive international image. A nation’s leaders generally consider how other countries, groups, and its own constituencies will view a foreign policy action. Apart from the physical changes produced by HA, the psychological effect—a positive international image—is part of the desired outcome. More tangible than image, a leader may desire political cooperation or political access as a result of its humanitarian aid. While cooperation is a short-term benefit derived when two nations, states, or groups work together for a common objective, access is an enduring result where humanitarian aid creates the context of not only temporary cooperation, but also sustainable agreements such as trade, military alliance, and cultural exchange. While cooperation and access require success at the operational and tactical levels, a positive international image, the first strategic level desired effect, may succeed even if tactical and operational actions fail to achieve their intended effects.

International Image

While hard to quantify, the world’s “image” of the United States is a powerful attribute. Much has been said of the “CNN effect”—when broadcast pictures of suffering compel the US government to act.³⁰ While not trying to prove or disprove the CNN effect, the ongoing debate

supports the idea that image matters and that our leaders remain concerned with the media's intentional or unintentional manipulation of how US citizens and other governments interpret US foreign policy. Joint Doctrine adds more support. While explaining the MOOTW principle labeled "restraint," doctrine contends that "failure to understand and comply with established rules of engagement can result in fratricide, mission failure, and *national embarrassment*" (emphasis added).³¹ The warning underscores that we not only desire to achieve our physical objectives, but that we also want to do so in a way that does not tarnish the nation's positive image. Prendergast criticizes the pursuit of a positive image when it is used as "cover for a lack of political engagement."³² He suggests this occurred when the US military engaged in Goma, Zaire, in the aftermath of the 1994 Rwandan genocide: "Sending in the US Military and giving the humanitarian effort a 'new' military look was planned to gloss over the US policy failure to prevent and stop the genocide."³³ These examples clearly demonstrate that creating a positive image is an important strategic level effect for humanitarian operations, an effect for which airpower plays a distinctive role.

Huge airplanes and sophisticated helicopters serve as an impressive image, one easily digested by television audiences and local people. Although camera crews on USAF flightlines record much of the flying process, the sound and speed-intense pictures of jets taking off always get broadcasted. Big airlifters such as C-5s and C-17s make dramatic images for television. Natsios wrote, "a military airlift is worth a hundred press conferences."³⁴ The visible symbol of planes operating remains more powerful than words of commitment from decision-makers—actions speak louder than words. Col Clifton Bray, Commander of the 86th Contingency Response Group during Operation Shining Hope, notes that countries delivering aid to Albanian refugees aspired to get their helicopters and national flags in front of television crews because it

reinforced their contribution and output more so than statistics.³⁵ The United States is not the only country that uses a glamorous aviation asset to send messages. There are, however, more substantial strategic level effects than merely a positive image.

Political Cooperation and Political Access

Some humanitarian assistance missions contain committed, enduring, geopolitical objectives while others, not to imply any less importance, are focused on short-term, limited objectives. Strategic level effects for HA are organized into two categories: political cooperation (i.e., short term) and political access (i.e., enduring). Examples help illuminate these concepts.

Humanitarian aid to and repatriation of Iraqi Kurds forced out of their communities allowed the continuation of Turkish cooperation in the US-led effort to pressure Iraq. While the United States did not pursue an objective to resolve permanently the question of a Kurdish homeland, it did use “military forces working with humanitarian agencies to create conditions necessary for the Kurds to feel safe enough to return to their home villages.”³⁶ US diplomats returned the situation to the status quo so that the United States’ tough Iraqi policy could be pursued without compromising Turkish cooperation. The power of our democratic values, discussed in the 1999 National Security Strategy, was subjugated to a higher foreign policy priority—sustaining pressure on Saddam Hussein. Another example—a case of economic aid, not humanitarian aid—occurred during the Vietnam War. President Johnson, desperate for cooperation from North Vietnamese, attempted to use aid as an enticement for them to change their policy toward the South.³⁷ Both examples pursued limited objectives over a time-scale short of what reasonably could be called permanent. It is important to recognize, these examples notwithstanding, that humanitarian aid can be part of a permanent, enduring objective.

The desired strategic effect of the Marshall Plan was enduring political access beyond limited cooperation. Matthew Caffrey, a wargaming expert at Maxwell AFB, Alabama, says, “If your former enemy has not become a key military ally, an important trading partner, and a principle vacation destination, then you have not achieved the highest level of victory.”³⁸ Marshall’s team successfully used aid to transform Germany, a former enemy, into a strong nation that participated in the US-led NATO alliance and became a major trading partner.³⁹ Hence, humanitarian aid serves as a diplomatic tool to create or sustain political access. The Berlin Airlift serves as another example. If the United States would have failed to sustain Berlin as a free city, the NATO alliance may never have occurred.⁴⁰ Political access captures the enduring strategic level effects one hopes to obtain, in part, through humanitarian aid. The commander’s role is to support these desired effects when they are part of one’s operations.

A Joint Force Commander or geographic Commander in Chief (CINC) cannot secure these strategic effects in isolation (and the commander may be only a supporting player). The president’s national security policy is coordinated with executive agencies beyond the military (e.g., State Department, CIA, and Commerce Department). The military’s role in a humanitarian aid mission can influence the results of strategic intentions, but unlike nuclear war, humanitarian aid requires more than just the military’s participation to achieve desired strategic effects. Here again, airpower’s role is limited. Airpower contributes to a positive international image, political cooperation, and political access, by making aid delivery possible. However, humanitarian aid delivery—devoid of a coherent foreign policy—may not produce the operation’s desired effects.

Sympathy is a very powerful emotion. It translates into wanting to “do something to relieve the suffering” during a complex emergency. Within an emergency, many different actors play roles in the system that delivers humanitarian aid, only one of which is the military. Airpower’s

role can create or help to create the tactical, operational, and strategic level effects described above. With a better understanding of what the desired effects are, we can improve our capacity as airmen to make positive contributions in the HA mission environment.

Notes

¹ Joint Publication (JP) 3-07, *Joint Doctrine for Military Operations Other Than War*, 16 June 1995, 3-4; US Agency for International Development Bureau for Humanitarian Response Office of US Foreign Disaster Assistance Prevention, Mitigation, Preparedness and Planning Division, *Mitigation Practitioner's Handbook*, October 1998, 6; Air Force Doctrine Document (AFDD) 2-3, *Military Operations Other Than War*, 3 July 2000, 25.

² *Humanitarian Charter and Minimum Standards in Disaster Response*, (Geneva, Switzerland: Sphere Project, 2000) 1.

³ Andrew S. Natsios, "Commander's Guidance: A Challenge of Complex Humanitarian Emergencies," *Parameters* 26, no. 2 (Summer 1996) 52.

⁴ Joanna Macrae and Anthony Zwi, ed., *War and Hunger: Rethinking International Responses to Complex Emergencies* (London: Zed Books, 1994), 8.

⁵ Leon Gordenker, *Refugees in International Politics* (New York: Columbia University Press, 1987) 108; Andrew S. Natsios, "Commander's Guidance: A Challenge of Complex Humanitarian Emergencies," *Parameters* 26, no. 2 (Summer 1996) 53.

⁶ "Kosovo Crisis Fact Sheet #50," on-line, Internet, 13 May 1999, available from http://www.usaid.gov/hum_response/ofda/kosofs50.html.

⁷ *Humanitarian Charter and Minimum Standards in Disaster Response*, (Geneva, Switzerland: Sphere Project, 2000) 314.

⁸ Thomas J. Keusters, World Food Program, interviewed by author, 4 Jan 2001.

⁹ Thomas J. Keusters, World Food Program, interviewed by author, 4 Jan 2001.

¹⁰ Mark R. Walsh, "Managing Peace Operations in the Field," *Parameters* 26, no. 2 (Summer 1996), 44.

¹¹ Joint Publication (JP) 3-07, *Joint Doctrine for Military Operations Other Than War*, 16 June 1995, 2-3.

¹² Kenneth Allard, *Somalia Operations: Lessons Learned* (Washington D.C.: National Defense University Press, 1995), 16.

¹³ Abraham H. Maslow, *Motivation and Personality* (New York: Harper and Row, 1987), 15-31.

¹⁴ Joanna Macrae and Anthony Zwi, ed., *War and Hunger: Rethinking International Responses to Complex Emergencies* (London: Zed Books, 1994), 215.

¹⁵ Joanna Macrae and Anthony Zwi, ed., *War and Hunger: Rethinking International Responses to Complex Emergencies* (London: Zed Books, 1994), 14.

¹⁶ B. H. Liddell Hart, *Deterrence or Defense: A Fresh Look at the West's Military Position* (New York: Praeger, 1960) 252.

¹⁷ Kenneth Allard, *Somalia Operations: Lessons Learned* (Washington D.C.: National Defense University Press, 1995), 14-16.

¹⁸ Leon Gordenker, *Refugees in International Politics* (New York: Columbia University Press, 1987), 54.

Notes

¹⁹ Andrew S. Natsios, "Commander's Guidance: A Challenge of Complex Humanitarian Emergencies," *Parameters* 26, no. 2 (Summer 1996) 57.

²⁰ Andrew S. Natsios, *U.S. Foreign Policy and the Four Horsemen of the Apocalypse: Humanitarian Relief in Complex Emergencies* (London: Praeger, 1997) 153.

²¹ Andrew S. Natsios, *U.S. Foreign Policy and the Four Horsemen of the Apocalypse: Humanitarian Relief in Complex Emergencies* (London: Praeger, 1997) 153.

²² Abraham H. Maslow, *Motivation and Personality* (New York: Harper and Row, 1987), 16.

²³ Andrew S. Natsios, "Commander's Guidance: A Challenge of Complex Humanitarian Emergencies," *Parameters* 26, no. 2 (Summer 1996), 62.

²⁴ Field Manual (FM) 100-5, *Operations*, Headquarters, Department of the Army, June 1993, 2-6.

²⁵ Admiral James O. Ellis, US Navy, "A View from the Top", briefing slides, undated.

²⁶ Field Manual (FM) 100-5, *Operations*, Headquarters, Department of the Army, June 1993, 2-6.

²⁷ Joint Publication (JP) 3-07, *Joint Doctrine for Military Operations Other Than War*, 16 June 1995, 2-4.

²⁸ Joint Publication (JP) 3-07, *Joint Doctrine for Military Operations Other Than War*, 16 June 1995, 2-5.

²⁹ Andrew S. Natsios, "Commander's Guidance: A Challenge of Complex Humanitarian Emergencies," *Parameters* 26, no. 2 (Summer 1996) 60-61.

³⁰ Andrew S. Natsios, *U.S. Foreign Policy and the Four Horsemen of the Apocalypse: Humanitarian Relief in Complex Emergencies* (London: Praeger, 1997) 124.

³¹ Joint Publication (JP) 3-07, *Joint Doctrine for Military Operations Other Than War*, 16 June 1995, 2-4.

³² John Prendergast, *Frontline Diplomacy: Humanitarian Aid and Conflict in Africa* (Boulder: Lynne Rienner, 1996), 8.

³³ John Prendergast, *Frontline Diplomacy: Humanitarian Aid and Conflict in Africa* (Boulder: Lynne Rienner, 1996), 8.

³⁴ Andrew S. Natsios, *U.S. Foreign Policy and the Four Horsemen of the Apocalypse: Humanitarian Relief in Complex Emergencies* (London: Praeger, 1997) 110.

³⁵ Col Clifton Bray, personal communication, 12 December 2000.

³⁶ Andrew S. Natsios, "Commander's Guidance: A Challenge of Complex Humanitarian Emergencies," *Parameters* 26, no. 2 (Summer 1996) 54.

³⁷ Henry Kissinger, *Diplomacy* (New York: Simon and Schuster, 1994) 672.

³⁸ Matthew Caffrey, personal communication, 12 March 2001.

³⁹ Henry Kissinger, *Diplomacy* (New York: Simon and Schuster, 1994) 453.

⁴⁰ John Gimbel, *The American Occupation of Germany: Politics and the Military, 1945-1949* (Stanford California: Stanford University Press, 1968) 202.

Chapter 5

Enhancing Airpower's Contributions to HA Missions

There is no clear controlling authority for the humanitarian aid logistical supply chain.¹ The UN's World Food Program often coordinates many activities during a disaster, but the NGOs are usually the ones who distribute aid.² When directed, the US military provides security and uses its unique logistical tools to reach isolated areas. Taking place within a multi-agency involvement wherein unity of effort is usually a stated goal, there exists no single authority to retain responsibility and accountability for designing the supply chain around the mission's desired effects. This presents no small challenge to overcome. With the exception of the Sphere Project, this study did not uncover a widespread appreciation within the military, UN, USAID, or private organizations that the supply chain should be managed centrally for optimal effect.³

Delivering aid directly to the affected population economizes the desired effects of securing the food supply and preventing disastrous population movements. A massive presence would not be necessary if instead of a stockpile and hub being developed inside a targeted region, intercontinental movements of aid could be achieved without being tied to an airport and its support facilities. Distribution would not be slowed changing modes from sealift and strategic airlift, to theater air, and, finally, ground movement. Faster aid delivery could result in fewer deaths by reducing the amount of time a person is exposed to a famine's conditions. There would also be an incentive for people to stay in their homes and communities rather than migrating to

search for aid—aid would come directly to them. Ground exposure in truck convoys would be minimized, but there would still be the visual image of American food and American airlifters delivering it. Keeping people at home and healthy would increase the likelihood that fragile economic, police, and government institutions could continue functioning while providing tools to strengthen them. It is necessary to speculate on what kind of methods and tools could create this effect.

New Methods and Tools

Current methods for point-to-point delivery without an airstrip are airdrops and helicopters. Both have been used in complex emergencies to deliver humanitarian aid, but suffer from capacity, range, and expense problems. Airdrop has the added limitation that it can be very imprecise.⁴ From 1993 to 1995, Special Operations Forces airdropped 17,500 tons of supplies over besieged Bosnian safe havens, but this can be thought of only as a very short-term solution because of useful payload and expense.⁵ Even with the limitations of the current airpower tools, optimization can occur by *intervening early* and *designing the humanitarian supply chain around the desired tactical and operational effects*.

Regardless of the tools used to deliver aid, intervention before populations start shifting in search of food and developing a diverse distribution network that brings aid to people while negating incentives for them to leave their homes will be necessary to create the desired effects. As discussed earlier, once someone leaves his or her home extensive damage has already been done. They may have sold possessions such as tools and livestock. They cannot bring all their possessions with them such as extra clothes, medicine, or bedding—aid agencies must supply these material requirements. The coping mechanisms they had developed through friends and family will disintegrate as it is probable that friends and families will separate during migration:

The intangible “emotional capital” spent giving up one’s home makes obstacles like depression and retributive violence more likely. Supplying aid to refugees may “ease their suffering,” but if the intent is to create effects that lead to a better state of sustainable peace, then the resources required to reach an end state will be far greater if the intervention starts after a massive refugee movement. Assuming the earliest possible intervention, methods (i.e., a dispersed aid supply chains) and tools (i.e., intercontinental direct delivery) can produce optimal effects. Let’s discuss each in turn.

The supply chain must be dispersed sufficiently to ensure it does not appear as an incentive for people to *move to* aid distribution locations. Along with the difficulties of reaching remote areas with aid, a large presence of American forces in a single area can attract people who are having trouble surviving. Certainly there is a natural motivation to travel to aid distribution points. Natsios relates the events of Somalia:

The operational plan for deploying US military units in Somalia increased the displaced population in Mogadishu by at least 25 percent: people came in from the countryside because they understandably thought they would be safer and better fed in an area controlled by US troops than in their own villages.... Senior personnel of the OFDA in USAID presented alternative plans which proposed moving units simultaneously into nine cities, with a smaller presence in Mogadishu. *For logistical reasons*, US Central Command chose a Mogadishu strategy. Thus an operational decision for entry into Somalia had profoundly undesirable strategic effects on the humanitarian, security, and political situations (emphasis added).⁶

NGOs did distribute substantial aid outside Mogadishu, but the city was not well equipped to handle a 25% increase in population—suffering increased. All actors, including the US military, did not design the supply chain with the priority of bringing food as close as possible to the people so that they would remain in their homes. The result proved to be more social turbulence both in communities that experienced loss of their members and in Mogadishu as it became overburdened with refugees. CENTCOM’s “logistical reasons” for choosing the Mogadishu-

centered strategy remain unclear: Were the reasons aimed at making it easier to supply the fielded forces, or were the reasons aimed at making the humanitarian aid supply chain more effective? The term logistics must be explained further as it encompasses “supporting” and “supported” logistical effects.

Simultaneously, there is a *supporting* logistical effort that sustains the fielded forces with materiel and supplies, and there is the *supported* logistical effort that delivers aid to the targeted population. The mission does not exist to support itself—it exists to deliver aid. John Fox, a Foreign Service Officer reflecting on the Somalia intervention, argues that—from military and *logistical* points of view—the Mogadishu-centered strategy made sense.⁷ His statement suggests confusion between the difference of logistics supporting the fielded forces and logistics making up the core mission of the operation—delivering aid. It may have made sense to economize support for American forces in Mogadishu, but it did not make sense for the humanitarian aid supply chain to create new refugees. His confusion demonstrates the need to view a supply chain as a mechanism that creates desired effects, and not predominantly as a supporting function to fielded forces: *During humanitarian assistance operations, the supply chain is the decisive element.* HA methods must include adequate consideration of the *supply chain as the tool* to create the desired effects discussed in chapter four. Yet, “new tools” can enhance our ability to achieve effects at all three levels of HA operations.

An airborne mechanism is required to deliver (directly) bulk items absent an infrastructure and at a minimum cost. I speculate on possible tools that can perform this task only to exercise creative thought on what can be done to optimize desired effects. A notional lighter than air vehicle being developed in Europe presents one possibility.

Cargolifter AG, a German-based company, is developing a semi-rigid airship that has a 160-ton capacity. Their design includes an on-board crane that requires little ground infrastructure and can land and take off on the area about the size of a football field.⁸ It does not need an airport nor major infrastructure to operate. Because there is no energy consumed to create lift and no induced drag, it does not consume as much fuel as a conventional airplane; therefore, this cost factor could be kept low.⁹ The airship possesses innate operational benefits as well.

The nature of the airship vehicle allows design features such as low radar cross section, low infrared signature, and vertical takeoff and landing. According to D.E. Ryan, a USAF officer studying the potential of airships for military airlift missions, an airship's vulnerability can be reduced to less than that of a C-5 or C-17.¹⁰ When security conditions permit, a daylight delivery would serve as an impressive symbol of American commitment to remedying the complex emergency. Protection from ground threats could be enhanced by night operations and establishing a temporary perimeter. Not having to protect ground convoys reduces threats to forces while securing the aid supply chain. Admittedly, the largest unknown for a new system is the cost. While it is difficult to speculate on the affordability of such a system for humanitarian aid delivery, a historical baseline exists for what the US government has paid in the past.

The amount paid in support of previous US HA missions in Somalia, the Balkans, and Northern Iraq would form a baseline for comparing the unit costs to make a new airpower tool, such as the airship, practical. However, it is not included in this conceptual study. The existence of these new tools requires military planners to combine them conceptually with doctrine, experience, and testing to see if their development would optimize achievement of the desired effects that support the US National Security Strategy. Although a new weapons system may

produce benefits, experience dictates that planners need to think through new weapons systems in anticipation of unintended consequences.¹¹

Unintended Consequences

Introducing new methods or tools may create ancillary effects that planners, agencies, and policy makers must manage. A lighter-than-air vehicle conducting intercontinental direct delivery of aid would most assuredly result in the diminished presence of American military power, producing an associated benefit by reducing risk and exposure. It may also create however, a weakness paradigm and an arrogance paradigm, possibly effecting the United State's image abroad. Further, relationships between NGOs, aid agencies, and the military may be weakened because of the changed aid delivery mechanism. In essence, moving more aid with airlift instead of ground transport may infringe on traditional NGO functions.

A humanitarian response involves a teaming between the military and NGOs which, if effective, can establish the conditions for a better state of peace. In a complex emergency, the NGOs are usually in theater long before the military. If violence gets in the way of NGOs transporting, distributing, or securing food, the military is the team member that possesses capabilities to address violence. The military, NGOs, and non-military government agencies have become aware of the need to work together. NGOs and their capabilities are examined during Professional Military Education (PME) for mid-grade and senior officers. OFDA's instructional handbooks include sections on working with the military.¹² The Sphere Project outlines parameters for NGOs working with government agencies.¹³ A new tool or new method would change the balance of working relationships. If the military takes a more active role in designing the logistical chain to bring aid closer to victims, the authoritarian directions may make the NGOs feel like they are giving up their independence and neutrality by associating too

closely with the US military. If a 160-ton lighter-than-air vehicle negates the need for ground-based transportation and warehousing, NGOs may feel threatened by US presence and terminate their efforts, leaving the remainder of the aid mission, including running feeding centers, to the US government. It is important to note that a healthy dialogue is ongoing between the agencies involved in humanitarian operations. Any new tool or method must be integrated so that it does not generate the unintended consequence of alienating NGO partners. In a similar way, we do not want to alienate world opinion.

While commanders can reduce ground forces by using an intercontinental airlift tool for direct delivery, a “weakness perception” and an “arrogance perception” could result, tarnishing the United States’ image internationally. The *weakness perception* grows out of the enemy’s view that US policy makers employ the new tool because they do not have the courage or commitment to sustain a large ground presence. US policy-maker’s inability to sustain public support for Vietnam and the present political, seemingly cultural, desire for military actions with no casualties are examples that demonstrate a perceived limit to America’s commitment. An enemy, aware of history’s lessons, could interpret US forces using intercontinental airlift as a weakening of American resolve because it is “afraid” to employ large ground forces. Similarly, international image could also be affected by an *arrogance perception*. The American ability to develop weapons that allow the application of force without subjecting its own forces to danger generates an arrogant appearance for many people. The perception could be sustained as Americans pursue national security objectives using new airlift tools “without any risks.” My own discussions with members of international military forces support the existence of the arrogance perception, and weapons that leave one “untouchable” to the enemy fuel this view/perception/belief. International opinion may judge the new lighter-than-air vehicle as

another indication of American arrogance. Still, although pitfalls exist, opportunities are available to enhance airpower's desired effects in HA missions.

Intervening early (i.e., before people leave their communities) and designing the humanitarian supply chain around a complex emergency's victims improves efficiency and effectiveness of HA operations. Aid delivered after migration with a supply chain optimized to support fielded military forces weakens desired effects. Airships capable of intercontinental direct delivery are a potential weapon enabling a fast, direct, and dispersed supply chain that reduces ground exposure and infrastructure. New methods and tools will improve capabilities to pursue national security objectives and create a better state of peace in the aftermath of complex emergencies.

Notes

¹ Colonel Clifton Bray, personal communication, 12 December 2000.

² *Humanitarian Charter and Minimum Standards in Disaster Response*, (Geneva, Switzerland: Sphere Project, 2000) 157.

³ *Humanitarian Charter and Minimum Standards in Disaster Response*, (Geneva, Switzerland: Sphere Project, 2000) 155.

⁴ Thomas J. Trask, *The Special Osprey: Impact on Special Operations Doctrine*, SAAS Thesis, Maxwell AFB, Alabama, (June 1996), 49.

⁵ Keith A. Hutcheson, *Air Mobility, The Evolution of Global Reach* (Vienna Virginia: Point One and VII Publishing, 1999), 72.

⁶ Andrew S. Natsios, "Commander's Guidance: A Challenge of Complex Humanitarian Emergencies," *Parameters* 26, no. 2 (Summer 1996), 54.

⁷ John G. Fox, "Approaching Humanitarian Intervention Strategically: The Case of Somalia." *Essays 2000* (Washington D.C.: National Defense University Press, 2000) 40.

⁸ *Lifter News*, marketing information available from Cargolifter A.G., July, 2000.

⁹ *Lifter News*, marketing information available from Cargolifter A.G., July, 2000.

¹⁰ D.E. Ryan, Jr., *The Airship's Potential for Intertheater and Intratheater Airlift*. (Maxwell AFB, AL: Air University Press, 1993) 40.

¹¹ Major G. Scott Gorman, *Endgame in the Pacific: Complexity, Strategy, and the B-29* (Maxwell AFB, AL: Air University Press, 2000) 4-5.

¹² US Agency for International Development Bureau for Humanitarian Response Office of US Foreign Disaster Assistance Prevention, Mitigation, Preparedness and Planning Division, *Field Operation Guide*, Version 3.0, undated.

¹³ *Humanitarian Charter and Minimum Standards in Disaster Response*, (Geneva, Switzerland: Sphere Project, 2000) 3, 315, 320.

Chapter 6

Conclusions

When we see that wounded traveler on the road to Jericho, we will not pass to the other side.

—President George W. Bush, Inaugural Address, 2001

A complex emergency is much more sophisticated than a pure natural disaster. While both entail extensive suffering, there can be a straightforward approach to bringing aid to a natural disaster. More is required when organized violence coexists with on-going famine wherein food serves as a weapon: Weapons and war belong to the domain of the US military. The tools used and the objectives sought in war must be linked to what is desired and feasible so that an end state can be envisioned toward achieving national security goals. Policy makers and military strategists must clearly understand the desired effects they seek through humanitarian aid.

The desired effects for humanitarian assistance missions cut across the tactical, operational, and strategic levels. Saving lives, preventing people from becoming refugees, and influencing behaviors are possible with small units targeting individuals for localized effects. However, influencing behavior would require a partiality that is currently rejected by most NGOs and the UN. At the operational level, a commander can coordinate and integrate tactical effects with the contributions of other agencies to secure aid supply lines, protect the people, contain the emergency, and create functioning institutions of an economy, police force, and government. However, military operational commanders face a fundamental conflict between the traditional

military value of seizing the initiative and the MOOTW principle of perseverance: Commanders must internalize the idea that one does not “win” a MOOTW engagement, but one does create the conditions necessary for positive, locally-sustainable change. Strategically, the effects may be limited to maintaining a positive international image, or policy-makers may aggressively pursue short-term political cooperation or enduring political access. Airpower enables the US government (in concert with its allies or coalition partners) to achieve these effects.

Full spectrum airlift makes a humanitarian aid supply chain possible. Helicopters, theater, and inter-theater airlifters haul cargo to main airports and austere airstrips, or deliver directly via airdrop. The UN, NGOs, and other US government agencies beyond the Department of Defense may execute some of the crucial functions such as managing feeding centers; however, HA demands a team approach—the military does not dictate the terms of engagement. Without airlift, there would be no mechanism for delivering aid to areas overcome by a complex emergency. To make the mechanism more effective, the military, and the USAF in particular, must improve its methods and tools.

Humanitarian assistance participants must agree on designing a supply chain to bring food close to people so they will not abandon their communities. Consequently, the military must employ a larger capacity airlift tool to deliver aid directly to an affected populace. Rather than preventing population transfers, an ill-conceived supply chain creates refugees as people in need leave their homes and move toward military hubs in hope of experiencing relief as a step toward regenerating their former way of life. The methods for delivering aid must include an adequately dispersed supply chain. New tools could also improve the supply chain by delivering large amounts of aid directly to dispersed communities rather than centralized airports. An intercontinental lighter-than-air vehicle that does not require infrastructure support and has a

160-ton capacity would reduce ground convoy exposure (i.e., enhanced force protection) and warehousing, while maintaining a visible, symbolic, and real presence as it performs inter-theater re-supply. However, while economizing the desired effects, unintended consequences could also result.

NGOs may feel alienated by new ways to design the supply chain and new tools to transport goods. Unless the military is ready to manage feeding centers during a wide-spread famine, new methods and tools must be integrated properly to ensure the continued participation of NGOs. A new airlift tool, such as the lighter-than-air vehicle, that can meet aid delivery requirements with a reduced “surface footprint” may sustain “weakness” and “arrogance” paradigms and corrupt our image internationally. The idea of weakness emulates from an adversary’s view that the United States lacks commitment and is using their capabilities that do not require many ground forces—“we are afraid.” The arrogance paradigm is an international perception evolving from the United States developing and using weapons that do not require us to put our own forces in harm’s way—“we are untouchable.” An enemy may pursue aggressively action to exploit the perceived United States’ “weaknesses,” while potential allies may be soured by perceived US “arrogance.” Both potential consequences parasitically impair improvement to humanitarian assistance operations—these factors must be managed in concert with the new tools and methods.

Airpower mechanisms that quickly target aid before people die or become refugees remain indispensable tools for achieving US national security strategy objectives. Since the military already possesses these unique tools and is familiar with deadly conflict, it must lead others to envision and synergistically integrate existing tools to achieve desired effects, as it actively pursues making the tools and methods more effective for HA operations.

Glossary

AFDD	Air Force Doctrine Document
CENTCOM	US Central Command
CINC	Commander in Chief
HA	Humanitarian Assistance
ICRC	International Committee of the Red Cross
JTF	Joint Task Force
IGO	International Government Organization
MOOTW	Military Operations Other Than War
NGO	Non-Governmental Organization
OFDA	Office of Foreign Disaster Assistance
UN	United Nations
USAF	United States Air Force
USAID	United States Agency for International Development

Bibliography

- Air Force Doctrine Document (AFDD) 2-3. *Military Operations Other Than War*. 3 July 2000.
- Alberts, David S., and Richard E. Hayes. *Command Arrangements for Peace Operations*. Washington D.C.: National Defense University Press, 1995.
- Allard, Kenneth. *Somalia Operations: Lessons Learned*. Washington D.C.: National Defense University Press, 1995.
- Ayers, J.R. *MOOTW in the New World Order: An Analysis of Joint Doctrine for the Coming Era*. Air Force Institute of Technology, Ohio: DTIC. May 1996.
- Belgrad, E.A., and N. Nachmias. *The Politics of International Humanitarian Aid Operations*. Westport, Connecticut: Praeger. 1997.
- Brand, David L.; Paul J. Bryson; and Alfredo Lopez, Jr. Intelligence Support to the Logistician in Somalia. *Military Intelligence*, October-December 1994.
- Corum, James S. "Airpower and Peace Enforcement." *Airpower Journal* 10. no.4. Winter 1996.
- Davis, D.M. *Operational Logistics in MOOTW: What Your CINC Needs to Know*. Naval War College Paper: DTIC. 1997.
- "Doctrine Watch #13: Effects-Based Operations (EBO)." on-line. Internet. 30 November 2000. available from <http://www.doctrine.af.mil/DoctrineWatch13.htm>
- "Doctrine Watch #14: Effects." on-line. Internet. 16 February 2001. available from <http://www.doctrine.af.mil/DoctrineWatch14.htm>
- Fox, John G. "Approaching Humanitarian Intervention Strategically: The Case of Somalia." *Essays 2000*. Washington D.C.: National Defense University Press, 2000.
- Gordenker Leon. *Refugees in International Politics*. New York: Columbia University Press, 1987.
- Gorman, Scott G. *Endgame in the Pacific: Complexity, Strategy, and the B-29*. Maxwell AFB, AL.: Air University Press, 2000.
- Haulman, Daniel L. *Wings of Hope, The U.S. Air Force and Humanitarian Airlift Operations*. Air Force History and Museums Program. 1997.
- Humanitarian Charter and Minimum Standards in Disaster Response*. Geneva, Switzerland: Sphere Project, 2000.
- Hutcheson, Keith A. *Air Mobility, The Evolution of Global Reach*. Vienna, Virginia: Point One and VII Publishing. 1999.
- Joint Publication (JP) 3-0. *Doctrine for Joint Operations*. 1 February 1995.

- Joint Publication (JP) 3-07. *Joint Doctrine for Military Operations Other Than War*. 16 June 1995.
- Joint Warfighting Center. *Joint Task Force Commander's Handbook for Peace Operations*. 16 June 1997.
- Kissinger, Henry. *Diplomacy*. New York: Simon and Schuster. 1994.
- Larson, D.A. *Logistics in Support of Operations Other Than War*. Naval War College: DTIC. 1997.
- Liddell Hart, B. H. *Deterrent or Defense*. New York: Praeger. 1960.
- Loescher, Ann D., and Gil Loescher. *The Global Refugee Crisis*. Santa Barbara, CA: ABC-CLIO, 1994.
- Macrae, Joanna, and Anthony Zwi, ed. *War and Hunger: Rethinking International Responses to Complex Emergencies*. London: Zed Books, 1994.
- Mandelbaum Michael. "The Reluctance to Intervene." *Foreign Policy*. Summer 1994.
- Natsios, Andrew S. "Commander's Guidance: A Challenge of Complex Humanitarian Emergencies," *Parameters* 26. no. 2. Summer 1996.
- Natsios, Andrew S. *U.S. Foreign Policy and the Four Horsemen of the Apocalypse*. Westport Conn.: Praeger, 1997.
- Paparone, C.R. "Logistics—Sometimes the Main Effort in MOOTW." *Army Logistician*. March-April 1996.
- Payne, L. *Lighter than Air: An Illustrated History of the Airship*. New York: Orion Books. 1977.
- Pease, Kelly Kate, and David P. Forsythe. *Human Rights, Humanitarian Intervention, and World Politics*. *Human Rights Quarterly*, 15, May 1993.
- Prendergast, John. *Frontline Diplomacy: Humanitarian Aid and Conflict in Africa*. Boulder: Lynne Rienner, 1996.
- Rizer, Kenneth R. *Military Resistance to Humanitarian War in Kosovo and Beyond*. Maxwell AFB, AL: Air University Press, 2000.
- Ryan, D.E., Jr. *The Airship's Potential for Intertheater and Intratheater Airlift*. Maxwell AFB, AL: Air University Press. 1993.
- Smith, R.M., and B.J. Stansfield. *The Process of Providing Humanitarian Assistance: A Department of Defense Perspective*. Fort Belvoir, VA: Defense Technical Information Center. 1995.
- Trask, Thomas J. *The Special Osprey: Impact on Special Operations Doctrine*. SAAS Thesis. Maxwell AFB, Alabama. June 1996.
- US Agency for International Development Bureau for Humanitarian Response Office of US Foreign Disaster Assistance Prevention. Mitigation, Preparedness and Planning Division. *Mitigation Practitioner's Handbook*. October 1998.

- US Agency for International Development Bureau for Humanitarian Response Office of US Foreign Disaster Assistance Prevention. Mitigation, Preparedness and Planning Division. *Field Operations Guide*.
- Vick, Alan; David T. Orletsky; Abram N. Shulsky; and John Stillion. *Preparing the U.S. Air Force for Military Operations Other Than War*. Washington D.C.: Rand, 1997.
- Walsh, M.R. "Managing Peace Operations in the Field." *Parameters*, Vol. 26, no. 2. Summer 1996.
- Warden, Col John A., III. "Air Theory for the Twenty-first Century." In *Challenge and Response: Anticipating US Military Security Concerns*. Edited by Dr. Karl P. Magyar et al. Maxwell AFB, Ala.: Air University Press, August 1994.
- Whitman, J., ed. *Peacekeeping and the UN Agencies*. Portland, Oregon: Frank Cass. 1999.
- Wilson, J.S. "Keeping Our Options Open: Another Possibility for Heavy Force Deployments." *Armor*. vol 59, no. 2. March-April 2000.